© SFI

Lac Tanganyika. Guide de la faune des poissons de la côte congolaise d'Ubwari à la Ruzizi
Fermon Y., Nshombo M., Muzumani R. & Jonas B.
Édition de l'Association France Cichlid (AFC), France, 2017, xxii + 226 p., ISNB 2-9513502-3-6

There are many books and scientific articles dealing with the fish fauna of Lake Tanganyika. But generally, the first ones present fish species belonging to many interesting and colourful varieties available for aquarium hobbyists. And the latter are the results of highly specialized scientific studies, which, most of the time, concern only a group of some species whose distribution is fairly restricted. The present book, in French, is a kind of compromise that covers the northwestern part of Lake Tanganyika, an area from the Ubwari Peninsula in the south to the Ruzizi River in the north. This book is a compromise because it has both high scientific rigour and presents an easy access for ornamental fish hobbyists. The book is arranged taxonomically by family and with practical keys to all genera and species.

The region of the Lake Tanganyika is highly biogeographically distinctive and is home to more than 300 fish species, of which a very high number appear to be endemic. Geologists believe that Lake Tanganyika was formed 7 to 10 million years ago, making it considerably older than Lake Malawi. Lake Tanganyika is located along the East African Rift and creates the borders between Tanzania and the Democratic Republic of the Congo. This elongated, rocky lake is about 710 km long and sometimes as wide as 80 km. Lake Tanganyika is a deep lake (second in the world after Lake Baikal, Russia), with some parts exceeding the depth of 1470 m.

Lake Tanganyika cichlids have adapted to the various ecological niches of the lake. Thus cichlids of Lake Tanganyika vary greatly in body shape, unlike the uniform shape of their counterparts in Lake Malawi. Feeding habits of Lake Tanganyika cichlids also differ. An interesting example of a specialisation of feeding behaviour, is the eating of the scales and fins of other fish. Lake Tanganyika is also home to more than 80 species of non-cichlid fish and about 60% of these are endemic. This book is the result of a survey that only concerns the northwestern part of the lake. As a result, less species (cichlids and non-cichlids) are presented here.

To guide the reader in the knowledge and determination of the fish species, the authors have adopted the slight formula of a "Fish Atlas" and not that of a complete fish fauna with all the details that support a description summarizing the important morphological features and a true taxonomic reference work, unfortunately few accessible to non-specialists. The aim of the book is to help ichthyologists with the identification of the species they collect. The authors have tried to make it practical and didactic by paying special attention to iconography and, in as far as possible, by giving priority to the simplest and easiest observable criteria. For each species an illustration and main biological features are provided along with a short distribution range. At the end of the book, we find a very interesting table that summarizes the presence of the all 192 species in the 34 sites sampled. A detailed map also allows to geolocate each site along the shores of the lake.

This book begins by some pages about the study area: a summary of the political and economic situation, the geological history of the Lake and its drainage, the presentation of the biotopes and their variability, and the different fish communities which inhabit each type of habitat or zone (pelagic, littoral or sub-littoral, benthic and swamps). Then, to help the reader, the authors present the main morphometric and meristic characters useful to overcome determination in different dichotomous keys. This chapter is rich in figures and illustrates the different methods which allow to measure or count the various characters. Finally, at the end of this part, the authors present a useful glossary of terms used in the main part of the book.

To access to the presentation of the 192 species listed in this work, it is necessary to pass by a dichotomous key to the 16 families listed in the studied area (according to the authors, 22 families may exist, but were not found during this study).

Then, a second series of dichotomous keys allows to determine the species in each family (or even in subfamilies in Cichlidae). Among the 192 species encountered, 119 are cichlids of which 115 are endemic haplochromines *sensu lato*. Some of the remaining 15 species are mono-specific (Protopteridae, Polypteridae, Claroteidae, electric catfish, Anabantidae). The others include more or less species: Clupeidae (2 endemic species), Mormyridae (3 species), Alestidae (4 species), Cyprinidae (12 species), Claroteidae (13 species of which 12 are endemic), Clariidae (6 species of which 4 are endemic)), Mochokiade (10 species of which 6 are endemic) Poeciliidae (2 species of which 1 is endemic), Latidae (4 endemic species) and Mastacembelidae (12 species of which 11 are endemic). Mastacembelid eels are a predominately riverine family and form a small species flock in Lake Tanganyika.

For each species, a sheet is giving the size or weight observed, the habitat (depth and environment), various biological information, geographic distribution, the possible interest of the fish (aquaculture, fishing and aquarium interest), all with a drawing and/or several photographs of good quality. At the end of the book, we highly appreciate different tables summarising elements of morphometry, depth where fish live and the type of habitat they attend.

For Africa, the present study is a continuation of large volumes on *Fishes of Southern Africa* (1993), *Fishes of West Africa* (2003), *Fishes of Lower Guinea* (2007) *Fishes of the Nile* (2009) and *Fishes of Zimbabwe* (2011).

The only reproach we can make to this guide relates to the choice of some drawings of poor quality and which do not bring much since high quality photographs exist for the same species.

Except this minor remark, it is a complete and synthetic guide for the determination of fish from the northwestern part of Lake Tanganyika. So, we warmly recommend this book, which will be very useful for naturalists, scientists and fishermen. Furthermore, its format is practical and not very bulky for field studies.

Didier PAUGY